

Figure 1. The APEX reaction: Extension of a surface-bound primer strand occurs by hybridization to a template strand in solution, recognition of this primer-template complex by a DNA polymerase, and the addition of a labeled terminating nucleotide triphosphate. When primers are arrayed on the surface, the method permits parallel analysis of many single-nucleotide sites in analyte DNA.

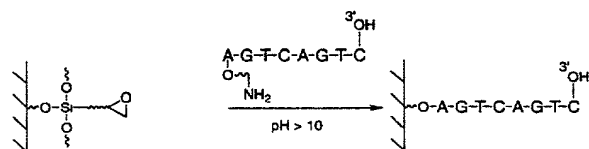


Figure 2. Conventional chemistry for immobilization of amine-derivatized oligonucleotides on epoxysilane-functionalized surfaces.

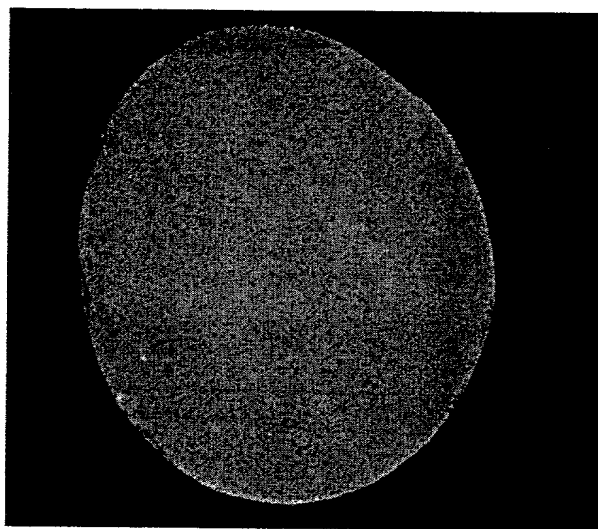


Figure 3. Confocal fluorescence micrograph of oligonucleotide **3** spotted on a slide functionalized with silane **A** and subjected to APEX with template **7**. The average fluorescence intensity across the spot is 88, while the average fluorescence intensity in the nearby dark region is 3.5. The mean diameter of the spot is 200 μm .

	Primer base			
	A	T	G	C
T				
A				
C				
G				

Figure 4